REMARKS

The Office Action dated July 9, 2003 has been carefully reviewed. Claims 1-12 are pending in this patent application. Reconsideration of this patent application in view of this response is respectfully requested.

I. Objection to the Specification

The Specification has been objected to by the Examiner in view of an informality in the Specification. Particularly, the Examiner indicates that there is no brief description of figure 4.

Upon review of the description of the figures under the heading "Brief Description of the Drawings", Applicant has determined that the description to the figures indicated as figures 2 and 3, are actually descriptions regarding figures 3 and 4. Therefore, these paragraphs have been amended accordingly. Therefore, a description to Fig. 2 has been added since it has been determined that this is the figure that was not described.

In view of the above, Applicant respectfully requests that the objection to the specification be withdrawn.

II. Objection to the Claims

Claims 10-12 were objected to by the Examiner in view of an informality in each claim. Particularly, the Examiner indicated that the term "RF" should be included after the phrase "radio frequency" for clarity. Applicant has amended

claims 10, 11 and 12 to add the term "RF" thereto in accordance with the Examiner's request.

In view of the above, Applicant respectfully requests withdrawal of the objection to the claims.

III. Rejection of Claims 1-7 and 10-12 Under 35 U.S.C. §102(b) (Blama)

Claims 1-7 and 10-12 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by US Patent 5,444,223 issued to Blama (hereinafter, "Blama"). Applicant respectfully submits that Blama does not anticipate claims 1-7 and 10-12. Particularly, contrary to the Examiner's assertion, Blama does not teach each and every limitation of claims 1-7 and 10-12. It is axiomatic that for a reference to anticipate a claim, each and every limitation of a claim must be identically shown.

Discussion re: Patentability of Independent Claim 1

a. Independent Claim 1

Independent claim 1, as amended, reads as follows:

A method of identifying an item comprising the steps of:
transmitting a plurality of different first signals having a plurality of different frequencies;
receiving second signals having second frequencies from an item label associated with the item, each second frequency corresponding to a known data bit position of an N-bit item identification number associated with the item;
determining third frequencies associated with the item label which were not received from the item label, each third frequency corresponding to another known data bit position of the N-bit item identification number associated with the item; and
determining the N-bit item identification number from the second and third frequencies, including the substeps of
assigning first values equal to a first binary value to each known data bit position of the N-bit item identification number for the second frequencies; and
assigning second values equal to a second binary value to each known data bit position of the N-bit item identification number for the third frequencies.

b. Blama Does Not Teach That the Second and Third Frequencies Correspond to Known Data Bit Positions in an N-bit Item Identification Number

Independent claim 1, includes the limitations of the second and third frequencies correspond to known data bit positions in an N-bit identification number associated with the item. Therefore, the received second frequencies and the determined third frequencies of the present invention indicate the position of the particular data bit in the N-bit item identification number. Stated another way, each different frequency indicates a known data bit position in the N-bit item identification number.

In contrast to the present invention, although Blama utilizes different frequencies to excite the various resonant circuits, Blama teaches that the position of a received signal (due to the exciting frequency) relative to the tag determines the position of the bit in a tag number. In column 3, lines 38-43, Blama states that "if any of the circuits located on the tag are resonant at the frequency transmitted, a binary number "1" is recorded for *that circuit's location*" (emphasis added) and " A circuit that is not resonant within the frequency range of the transmitted signal is given a binary number "0" and *that circuit's location is recorded* " (emphasis added). Moreover, in column 5, lines 53-61, Blama further indicates that "if any of the capacitor 14 and inductor coil 12 circuits, C_1 through C_N, are found resonant at the particular frequency transmitted by the scanner, a "bit" of information is interpreted as a binary number "1" *being located at a particular position on the tag 10* (emphasis added). On the other hand, if

resonance is not detected, that "bit" of information is interpreted as a binary number "0" *being located at a particular position on the tag 10* (emphasis added)."

It is thus clear that Blama is looking to the position (origin) of the received signal to determine its bit position in the tag's number, and not the frequency itself for determining the bit position of the N-bit identification number. Therefore, Blama does not teach second and third frequencies that correspond to known data bit positions in an N-bit identification number associated with the item, as recited in independent claim 1.

c. Conclusion

Since it has been shown above that Blama does not teach each and every limitation of independent claim 1, a prima facie case of anticipation under 35 U.S.C. § 102 has not been established with regard to the invention of independent claim 1. Accordingly, withdrawal of the rejection to claim 1 under §102(b) and allowance thereof is hereby respectfully requested.

Discussion re: Patentability of Claim 2

Claim 2 includes independent claim 1 as a base claim. As a result, claim 2 is allowable for the reasons hereinbefore discussed with regard to claim 1. Moreover, claim 2 includes additional limitations not taught by Blama. Particularly, claim 2 recites: receiving a fourth signal having a fourth frequency

from the item label; and determining from receipt of the fourth signal that the second signals were from the item label.

The Examiner has indicated in the 7/9/03 Office Action, page 3, that Blama teaches receipt of a fourth signal wherein the fourth signal indicates that the second signals were from the item label. The fourth signal is the label present bit, f_p, since it is the label present bit that indicates whether a tag is present. Particularly, the last paragraph on page 7 of the present Specification indicates that "RFID interrogator 14 determines whether one of the signals is at frequency f_p, which would indicate that an RFID label has been interrogated and is present." Nowhere in Blama does Blama teach receiving a "tag is here" signal as recited in claim 2.

Therefore, in view of the above, claim 2 is further allowable over the cited art. Applicant thus respectfully requests withdrawal of the rejection to claim 2.

Discussion re: Patentability of Independent Claim 3

a. Independent Claim 3

Independent claim 3, as amended, reads as follows:

A method of identifying an item comprising the steps of:
interrogating antennas associated with the item which are tuned to first frequencies of a plurality of different frequencies;
receiving the first frequencies, each received first frequency corresponding to a known data bit position of an N-bit item identification number associated with the item;
determining second frequencies of the plurality of different frequencies, each determined second frequency corresponding to another known data bit position of the N-bit item identification number associated with the item; and
determining the N-bit item identification number for the first and second frequencies, including the substeps of
assigning first values equal to a first binary value to each known data bit position of the N-bit item identification number for the first frequencies; and
assigning second values equal to a second binary value to each known data bit position of the N-bit item identification number for the second frequencies.

b. Blama Does Not Teach That the First and Second Frequencies Correspond to Known Data Bit Positions in an N-bit Item Identification Number

The arguments with respect to the non-anticipation of independent claim 1 are applicable to independent claim 3 and are therefore incorporated herein by reference. It has been shown in those arguments that Blama does not teach second (in claim 3, first) and third (in claim 3, second) frequencies that correspond to known data bit positions in an N-bit identification number associated with the item. Since independent claim 3 includes these limitations, it is axiomatic that Blama cannot anticipate independent claim 3.

c. Conclusion

Since it has been shown above that Blama does not teach each and every limitation of independent claim 3, a prima facie case of anticipation under 35 U.S.C. § 102 has not been established with regard to the invention of independent claim 3. Accordingly, withdrawal of the rejection to claim 3 under §102(b) and allowance thereof is hereby respectfully requested.

Discussion re: Patentability of Independent Claim 4

a. Independent Claim 4

Independent claim 4, as amended, reads as follows:

A method of identifying an item comprising the steps of:
    interrogating antennas affixed to the item as part of an item label;
    receiving first different frequencies from the antennas, each first frequency corresponding to a known data bit position of an N-bit item identification number associated with the item;
    determining second different frequencies asociated with the item label which were not received, each determined second frequency corresponding to another known data bit position of the N-bit item identification number associated with the item; and

determining the N-bit item identification number from the first and second frequencies, including the substeps of
assigning first values equal to a first binary value to each known data bit position of the N-bit item identification number for the first frequencies; and
assigning second values equal to a second binary value to data bit position of the N-bit item identification number for the second frequencies.

b. Blama Does Not Teach That the First and Second Frequencies Correspond to Known Data Bit Positions in an N-bit Item Identification Number

The arguments with respect to the non-anticipation of independent claim 1 are applicable to independent claim 4 and are therefore incorporated herein by reference. It has been shown in those arguments that Blama does not teach second (in claim 4, first) and third (in claim 4, second) frequencies that correspond to known data bit positions in an N-bit identification number associated with the item. Since independent claim 4 includes these limitations, it is axiomatic that Blama cannot anticipate independent claim 4.

c. Conclusion

Since it has been shown above that Blama does not teach each and every limitation of independent claim 4, a prima facie case of anticipation under 35 U.S.C. § 102 has not been established with regard to the invention of independent claim 4. Accordingly, withdrawal of the rejection to claim 4 under §102(b) and allowance thereof is hereby respectfully requested.

Discussion re: Patentability of Independent Claim 5

a. Independent Claim 5

Independent claim 5 reads as follows:

A method of identifying an item comprising the steps of:
interrogating antennas;
receiving a plurality of different first frequencies from the antennas;
determining from a second frequency of the first frequencies that the antennas are associated with an item label;
determining third frequencies equal to a remainder of the first frequencies;
determining fourth frequencies associated with the item label which were not received; and
determining an item identification number from the third and fourth frequencies, including the substeps of
assigning first values equal to a first binary value to first data bits occupying first data bit positions in the item identification number for the third frequencies; and
assigning second values equal to a second binary value to second data bits occupying second data bit positions in the item identification number for the fourth frequencies.

b. Blama Does Not Teach Receiving a Fourth Signal Representing That an Identification Tag is Present

The arguments with respect to the non-anticipation of claim 2 are applicable to independent claim 5 and are therefore incorporated herein by reference. It has been shown in those arguments that Blama does not teach receiving a fourth signal that represents that the identification tag is present and has been read. Since independent claim 5 includes these limitations, it is axiomatic that Blama cannot anticipate independent claim 5.

c. Conclusion

Since it has been shown above that Blama does not teach each and every limitation of independent claim 5, a prima facie case of anticipation under 35 U.S.C. § 102 has not been established with regard to the invention of independent claim 5. Accordingly, withdrawal of the rejection to claim 5 under §102(b) and allowance thereof is hereby respectfully requested.

Discussion re: Patentability of Independent Claim 6

a. Independent Claim 6

Independent claim 6 reads as follows:

A method of identifying an item comprising the steps of:
establishing a mapping of a plurality of different frequencies to a plurality of different data bit positions in an item identification number;
interrogating antennas affixed to the item as part of an item label;
receiving only first frequencies of the plurality of different frequencies;
determining second frequencies equal to a remainder of the plurality of different frequencies; and
determining the item identification number from the first and second frequencies, including the substeps of
assigning first values equal to a first binary value to first data bits occupying first data bit positions in the item identification number for the first frequencies; and
assigning second values equal to a second binary value to second data bits occupying second data bit positions in the item identification number for the second frequencies.

b. Blama Does Not Teach Mapping of a Plurality of Different Frequencies to a Plurality of Different Data Bit Positions in an Item Identification Number

The arguments with respect to the non-anticipation of claim 1 are applicable to independent claim 6 and are therefore incorporated herein by reference. It has been shown in those arguments that Blama does not teach the mapping of each frequency to a particular data bit position in an item identification number, since Blama teaches utilizing position of the particular circuit (not its frequency) as a bit position determiner. Since independent claim 6 includes these limitations, it is axiomatic that Blama cannot anticipate independent claim 6.

c. Conclusion

Since it has been shown above that Blama does not teach each and every

limitation of independent claim 6, a prima facie case of anticipation under 35

U.S.C. § 102 has not been established with regard to the invention of

independent claim 6. Accordingly, withdrawal of the rejection to claim 6 under

§102(b) and allowance thereof is hereby respectfully requested.

Discussion re: Patentability of Independent Claim 7

a. Independent Claim 7

Independent claim 7 reads as follows:

A method of identifying an item comprising the steps of:
> transmitting a plurality of different signals at a plurality of different frequencies;
> receiving a first signal having a first frequency;
> receiving second different signals having second different frequencies;
> determining from receipt of the first signal that the first and second signals were reflected from antennas of an item label;
> determining first data bit signals in the second different signals having first data bit signal frequencies;
> determining second data bit signals having second data bit signal frequencies which were not received from the item label; and
> determining an item identification number from the first and second data bit signal frequencies, including the substeps of
>> assigning first values equal to a first binary value to first data bits occupying first data bit positions in the item identification number for the first data bit signal frequencies; and
>> assigning second values equal to a second binary value to second data bits occupying second data bit positions in the item identification number for the second data bit signal frequencies.

b. Blama Does Not Teach Receiving a First Signal Representing That First and Second Data Signals Were Reflected From Antennas of an Item Label

The arguments with respect to the non-anticipation of claim 2 are

applicable to independent claim 7 and are therefore incorporated herein by

reference. It has been shown in those arguments that Blama does not teach

receiving a signal that represents that the identification tag is present and has

been read. In independent claim 7, a first signal is provided that represents whether first and second signals were reflected from antennas of an item label tag.

c. Conclusion

Since it has been shown above that Blama does not teach each and every limitation of independent claim 7, a prima facie case of anticipation under 35 U.S.C. § 102 has not been established with regard to the invention of independent claim 7. Accordingly, withdrawal of the rejection to claim 7 under §102(b) and allowance thereof is hereby respectfully requested.

Discussion re: Patentability of Independent Claim 10

a. Independent Claim 10

Independent claim 10, as amended, reads as follows:

A radio frequency (RF) identification system comprising:
   an RF interrogator which transmits signals at a plurality of different frequencies and which receives first frequencies of the plurality of different frequencies from an item label, each first frequency corresponding to a known data bit position of an N-bit item identification number; and
   a computer which determines second frequencies of the plurality of different frequencies which were not received by the RF interrogator, each second frequency corresponding to another data bit position of the N-bit item identification number, and which determines the N-bit item identification number from the first and second frequencies by assigning first values equal to a first binary value to each known data bit position of the N-bit item identification number for the first frequencies and assigning second values equal to a second binary value to each known data bit position of the N-bit item identification number for the second frequencies.

b. Blama Does Not Teach That the First and Second Frequencies Correspond to Known Data Bit Positions in an N-bit Item Identification Number

The arguments with respect to the non-anticipation of independent claim 1 are applicable to independent claim 10 and are therefore incorporated herein by reference. It has been shown in those arguments that Blama does not teach second (in claim 10, first) and third (in claim 10, second) frequencies that correspond to known data bit positions in an N-bit identification number associated with the item. Since independent claim 10 includes these limitations, it is axiomatic that Blama cannot anticipate independent claim 10.

c. Conclusion

Since it has been shown above that Blama does not teach each and every limitation of independent claim 10, a prima facie case of anticipation under 35 U.S.C. § 102 has not been established with regard to the invention of independent claim 10. Accordingly, withdrawal of the rejection to claim 10 under §102(b) and allowance thereof is hereby respectfully requested.

Discussion re: Patentability of Independent Claim 11

a. Independent Claim 11

Independent claim 11, as amended, reads as follows:

A radio frequency (RF) item identification system comprising:
an RF interrogator which transmits first signals at a plurality of different first frequencies and which receives second signals at second frequencies including a third signal at a third frequency;
a computer which determines from the third signal that the second signals are from an item label, which determines fourth signals at fourth frequencies associated with the item label that were not received by the RF interrogator, and which determines an item identification number from the second and fourth frequencies by assigning first values equal to a first binary value to first data bits occupying first data bit positions in the item identification number for the second frequencies and assigning second values equal to a second binary value to second data bits occupying second data bit positions in the item identification number for the fourth frequencies.

b. Blama Does Not Teach Receiving a Third Signal Representing That an Identification Tag is Present

The arguments with respect to the non-anticipation of claim 2 are applicable to independent claim 11 and are therefore incorporated herein by reference. It has been shown in those arguments that Blama does not teach receiving a third signal that represents that the identification tag is present and has been read. Since independent claim 11 includes these limitations, it is axiomatic that Blama cannot anticipate independent claim 11.

c. Conclusion

Since it has been shown above that Blama does not teach each and every limitation of independent claim 11, a prima facie case of anticipation under 35 U.S.C. § 102 has not been established with regard to the invention of independent claim 11. Accordingly, withdrawal of the rejection to claim 11 under §102(b) and allowance thereof is hereby respectfully requested.

Discussion re: Patentability of Independent Claim 12

a. Independent Claim 12

Independent claim 12, as amended, reads as follows:

A radio frequency (RF) item identification system comprising:
an RF interrogator which interrogates antennas affixed to the item as part of an item label and which receives first signals having first frequencies; and
a computer which establishes a mapping of a plurality of different frequencies including the first frequencies to a plurality of different data bit positions in an item identification number, which determines second signals having second frequencies within the plurality of different frequencies that were not received by the RF interrogator, and which determines the item identification number from the first and second frequencies by assigning first values equal to a first binary value to first data bits occupying first data bit positions in the item identification number for the first frequencies and by assigning

second values equal to a second binary value to second data bits occupying second data bit positions in the item identification number for the second frequencies.

b. Blama Does Not Teach Mapping of a Plurality of Different Frequencies to a Plurality of Different Data Bit Positions in an Item Identification Number

The arguments with respect to the non-anticipation of claim 6 are applicable to independent claim 12 and are therefore incorporated herein by reference. It has been shown in those arguments that Blama does not teach the mapping of each frequency to a particular data bit position in an item identification number, since Blama teaches utilizing position of the particular circuit (not its frequency) as a bit position determiner. Since independent claim 12 includes these limitations, it is axiomatic that Blama cannot anticipate independent claim 12.

c. Conclusion

Since it has been shown above that Blama does not teach each and every limitation of independent claim 12, a prima facie case of anticipation under 35 U.S.C. § 102 has not been established with regard to the invention of independent claim 12. Accordingly, withdrawal of the rejection to claim 12 under §102(b) and allowance thereof is hereby respectfully requested.

IV. Rejection of Claims 8 and 9 35 U.S.C. §103(a) (Blama and Roesner)

Claims 8 and 9 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable under 35 U.S.C. §103(a) as obvious over U.S. Patent 5,444,223 issued to Blama (hereinafter, "Blama") in view of U.S. Patent 5,583,819 issued to

Roesner et al. (hereinafter, "Roesner"). Applicant respectfully submits that Blama and Roesner do not render obvious dependent claims 8 and 9.

Each of claims 8 and 9 includes independent claim 7 as a base claim. Therefore, the arguments with respect to the non-anticipation of independent claim 7 are applicable to claims 8 and 9 and are incorporated herein. It has been shown above that Blama does not teach each and every limitation of claim 7.

Roesner is utilized by the Examiner for teaching the use of a check bit. While Roesner does teach the use of a check bit, Roesner does not teach or suggest the shortcomings of Blama as indicated above with respect to independent claim 7. Therefore, since Roesner does not teach or suggest the shortcomings of Blama, the addition of Roesner cannot render claims 8 and 9 obvious.

Therefore, in view of the above, Applicant respectfully requests the withdrawal of the rejection to claims 8 and 9.

V. CONCLUSION

In view of the foregoing, it is submitted that this application is in condition for allowance. Therefore, Applicant respectfully requests the withdrawal of the objections and rejections to the claims, and an early allowance of all pending claims.

Respectfully submitted,

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